CLAIMS

1. A method of producing an electronic device (100) having a stratified electro-optical stack (90) on a substrate (10) carrying an electrode structure (12), the method comprising the steps of:

providing the substrate (10) carrying the electrode structure (12);

providing a further substrate (20);

depositing a mixture of an electro-optical material (32) and a polymer precursor (34) on the further substrate (20);

forming the stratified electro-optical stack (90) by polymerizing the polymer precursor (34) into a polymer layer (44) sandwiching the electro-optical material (32) between the polymer layer (44) and the further substrate (20); and

adhering the substrate (10) to the stratified electro-optical stack (90).

2. A method as claimed in claim 1, wherein the step of adhering the substrate (10) to the stratified electro-optical stack (90) is preceded by providing the substrate (10) with an adhesive layer (60).

3. A method as claimed in claim 1, wherein the step of adhering the substrate (10) to the stratified electro-optical stack (90) is preceded by providing the stratified electro-optical stack (90) with an adhesive layer (44, 50, 60).

4. A method as claimed in claim 3, wherein the step of providing the stratified electro-optical stack (90) with an adhesive layer (50) comprises providing the stratified electro-optical stack (90) with an adhesive planarization layer (50) over the polymer layer (44).

5. A method as claimed in claim 2 or 4, further comprising the steps of:

providing the further substrate (20) comprising a polymer support (28) covered by a light-sensitive release lacquer prior to the step of depositing a mixture of a electro-optical material (32) and a polymer precursor (34) on the further substrate (20); and

releasing the polymer support (28) by providing a light stimulus to the light-sensitive release lacquer after adhering the substrate (10) to the stratified electro-optical stack (90).

6. A method as claimed in claim 5, further comprising the step of covering the photosensitive release lacquer with a barrier layer prior to the step of depositing a mixture of an electro-optical material (32) and a polymer precursor (34) on the further substrate (20).

7. A method as claimed in claim 1, further comprising the step of providing the further substrate (20) with a conductive layer (22) prior to the step of depositing a mixture of an electro-optical material (32) and a polymer precursor (34) on the further substrate (20).

8. A method as claimed in claim 1, further comprising the step of adding an adhesive to the mixture of an electro-optical material (32) and a polymer precursor (34) prior to the step of depositing the mixture on the further substrate.

9. A method as claimed in claim 1, wherein the electro-optical material (32) is a liquid crystal material, the method further comprising the step of providing the further substrate with an alignment layer (26) prior to the step of depositing a mixture of an electro-optical material (32) and a polymer precursor (34) on the further substrate.

10. A method as claimed in claim 9, further comprising the step of providing the substrate (10) with a light-polarizing layer (14).

11. A method as claimed in claim 2 or 3, further comprising the step of activating the adhesive layer (60) by means of pressure.

12. An electronic device (100) comprising:

a substrate (10) carrying an electrode structure (12);

an electro-optical stack (90) at least partially covering the electrode structure (12), the electro-optical stack (90) comprising a stratified polymer layer (44), a further substrate (20) and an electro-optical material (32) sandwiched between the polymer layer (44) and the further substrate (20); and

an adhesive layer (44, 50, 60) between the substrate (10) and the electro-optical stack (90).

13. An electronic device (100) as claimed in claim 12, wherein the polymer layer (44) comprises the adhesive layer.

14. An electronic device (100) as claimed in claim 13, wherein the adhesive layer (50, 60) is oriented between the polymer layer (44) and the substrate (10).

15. An electronic device (100) as claimed in claim 14, wherein the adhesive layer is a planarization layer (50).

16. An electronic device (100) as claimed in claim 12, wherein the electro-optical material (32) comprises a liquid crystal material, the electronic device (100) further comprising:

an alignment layer (26) between the electro-optical material (32) and the further substrate (20);

a first light-polarizing layer (14) between the electro-optical material (32) and the substrate (10); and

a second light-polarizing layer (24) between the alignment layer (26) and the further substrate (20).

17. An electronic device (100) as claimed in claim 12, 13 or 14, wherein the electro-optical material (32) comprises a liquid crystal material, the electronic device (100) further comprising:

an alignment layer (26) between the electro-optical material (32) and the further substrate (20); and

a first polarizer (102) and a second polarizer (104), the substrate (10) and the electro-optical stack (90) being oriented between the first polarizer (102) and the second polarizer (104).

18. An electronic device (100) as claimed in claim 12, wherein the further substrate (20) comprises a colour filter plate.

19. An electronic device (100) as claimed in any of the claims 12-18, the electronic device (100) further comprising a conductive layer (22) between the further substrate (20) and the electro-optical material (32).

20. An electronic device (100) as claimed in any of the claims 12-19, wherein the further substrate (20) comprises a plastic substrate.

21. An electronic device as claimed in any of the claims 12-19, wherein the further substrate (20) comprises a glass substrate.

22. An electronic device as claimed in any of the claims 12-19, wherein the further substrate (20) comprises a light-sensitive release lacquer.